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ABSTRACT

This study was designed to determine whether children's judgments of another's emotional state are based on egocentric or perspectivistic reasoning processes. A total of 91 children, between the ages of 3 and 10, at three grade levels, were shown a series of photographs containing conflicting situational and expressive cues to the pictured child's emotional state. The children between 3 and 7 years of age based 96 percent of their judgments on the expressive cues, while the correspondence between expressive cues and judgments decreased to 86 percent for the 9- to 10-year-olds. The subjects' own emotional responses to the photographs appeared to be independent from their judgments. It is argued that these results support the conclusion that children as young as 3 years of age judge the emotional states of others on the basis of perspectivistic reasoning processes, and that the development of social reasoning proceeds along a continuum from simple to more complex reasoning processes. (Author/BRT)

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A Developmental Study of Empathy: Egocentrism to Sociocentrism or Simple to Complex Reasoning?

by
Marilyn Sheehan Watson

This study was designed to provide insight into the development of cognitive processes used by children in making judgments of the nature of another person's emotional state. Other investigators have provided evidence that children as young as 3 can accurately judge the emotional states of another (Borke, 1971; Chandler and Greenspan, 1972). While this fact would appear to countradict the widely held belief that children under 7 are limited to egocentric reasoning processes, there is no clear evidence that judgments made by the children in the above studies were based on sociocentric reasoning processes rather than egocentric ones. Chandler and Greenspan (1972) present data relevant to the egocentric nature of the reasoning processes involved when young children comprehend another person's state of knowledge, but not another's emotional state. Burns and Cavey (1957) present data which they interpret as supporting the hypothesis that children under 5 use egocentric reasoning when making judgments of the nature of another's emotional state, but because their experimental procedures were confounded with their independent variables, the interpretation of their data remains open to question.[1] The data from Borke's study (1971), although clearly establishing that young children have the ability to make accurate judgments of the nature of another's emotional experience, do not distinguish between egocentric and sociocentric reasoning processes. The present

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study attempted to set a task of emotion recognition in such a way that the judgments based on egocentric reasoning processes would be distinguishable from those based on sociocentric reasoning.

To start, a logical (though not necessarily psychological) analysis of the constructs of egocentric and sociocentric reasoning and of the thought processes they represent, provides a background for the empirical analysis. Believed by many to be chronically first, egocentric thinking begins by understanding either the inner states of the self or the laws which govern those states, and ends by inferring the states of others from this self knowledge. If we assume that there are two basic aspects relevant to understanding the nature of another person's emotional state, on the one hand, the other's situation (i.e., what's happening to him), and on the other hand, the other's emotional expression, then the number of potential egocentric reasoning processes is limited to 4 logically distinct types.[2]

In the first two of these reasoning processes, the situation provides the primary cue to the other's emotion. In the first, labeled situational emotional projection, the child projects himself into the other's situation, feels what he himself would feel under these conditions, and thereby judges that the other is experiencing the same feeling.[3] In this egocentric process the child starts with a knowledge of his own inner state (i.e., how he does now feel) and from this knowledge infers that the other person feels the same way. On the other hand, in the 2nd egocentric process

based on the situational cue, the child starts with knowledge of the laws that govern his own inner states and assumes that the same laws govern the other person's inner states. In this process, labeled situational projective inference, the child intellectually recognises what his feeling would be were he in the other's situation and projects those feelings into the other person.[4]

The third and fourth types of egocentric reasoning reflect the same processes as the first 2 types, but take expressive rather than situational factors as the primary cue. Thus, to arrive at a judgment of the other's emotional state through the egocentric reasoning process labeled expressive emotional projection, the child projects himself into the other's expressive behavior, feels what he himself would feel if he were exhibiting that behavior and thereby judges that the other is experiencing the same feeling. In the 4th egocentric process, expressive projective inference, the child knows how he himself would feel if he were displaying the other person's expressive behavior and projects that feeling into the other.

By contrast to all types of egocentric thinking which begins from the self, sociocentric thinking begins by recognising observable characteristics of the other person and ends by infering the other's inner states from these objective criteria. Given this logical analysis, the present study sought insight into the particular thought processes used by children in their attempts to judge the nature of another's emotional state by seeking answers to the following two questions: 1) which cues to another's emotion,

expressive or situational, determine a child's judgment of that emotion?, and 2) is a child's cognitive judgment of the nature of another's emotion independent of his own emotional reaction to the stimulus picture?.

METHOD

The sample was drawn from the 1st year classes of 4 private nursery schools and from the 1st and 4th grades of a school in a suburban white middle class neighborhood. In an individual interview each child was shown a set of 8 black and white photographs, 4 of which showed only situational cues to the feeling of the child in the photograph and 4 of which showed only expressive cues. The 4 situations depicted were 1) having a birthday party, 2) opening a package, 3) spilling one's ice cream cone, and 4) having broken a record. (See Figures 1 and 2 for sample photographs). Ninety-one of the 139 children interviewed correctly named the sad or happy emotion normally expected to accompany each of the 4 situations and correctly identified each of the 4 sad or happy facial expressions which were depicted. In its final composition the full 91 subject sample represented groups of between 12 and 17 boys and girls from each of the three grade levels.[5] Each subject was shown 16 photographs representing all possible combinations of the 4 situations by 2 emotional expressions (happy and sad) as depicted by two children (a 1st grade boy and girl). (See Figures 1 and 2). Thus, half of the photographs depicted a child displaying an emotion incongruous with the situation, e.g., a smiling child holding a spilled ice cream cone, while in the other half the depicted emotion was congruous. The

subject was asked 1) to identify the emotion being experienced by the child in the picture and 2) to say if he had any feeling from looking at the picture and if so, what it was. Between each photograph presentation the subjects were given short tasks to counter emotional contamination from one picture to the next and to help prevent boredom with the task.

RESULTS

Judgments made to the incongruous pictures provide the focal data of this study. These data can be summarized very briefly. The results with respect to the 1st question, which cues to another's emotion, expressive or situational, determine a child's judgment of that emotion, are very clear. 96% of the emotional judgments made by the nursery school children and 97% of the emotional judgments made by the 1st graders were consistent with the facial expression rather than the situational cue; at the 4th grade level consistency between judgment and facial expression cue decreased to 86%. This high consistency between the nature of the expressive cue and the judgments made allows us to conclude that at least the nursery and 1st grade children were not using any form of reasoning based on the situational cue. Thus, we can conclusively reject, for these age groups, both forms of situation based egocentric reasoning processes, situational emotional projection and situational projective inference.

As for the 2nd major question of whether a child's judgment of the nature of another's emotional state is independent of his own emotional response to the stimulus picture, the results are not

so simply stated. First of all, emotional responses to the photographs were reported rather infrequently; the nursery school children on the average reporting emotional responses 30% of the time and the 1st and 4th graders reporting them approximately half of the time (53% and 49% respectively). Examining those instances where subjects did report experiencing an emotion, binomial tests indicate that the subject's own emotional response to a picture was independent of his cognitive judgment of the other person's emotion.[6] This finding allows us to rule out any form of reasoning which infers the inner states of others from the subject's knowledge of his own inner states. Thus, for at least those subjects who reported experiencing an emotion, the 3rd type of egocentric reasoning, expressive emotional projection, can be eliminated from consideration as a possible process.

The 4th and last remaining type of egocentric thought process, expressive projective inference, is not inconsistent with the results. It is therefore possible that the subject's judgments might have resulted from expressive projective inference. That is, their judgments of the pictured child's emotion may have been based on 1) recognition of the pictured child's expression, 2) knowledge of how he the subject would feel if exhibiting that expression, and 3) inference that the pictured child feels as he the subject would feel. This seems a rather unlikely form of thought process for young children. If the children were using a form of projective inference there seems no reason for them to

rely exclusively on the expressive cues, since both expressive and situational cues effected their own emotional responses to the pictures. It seems unlikely that children would judge the emotion of another almost entirely on the basis of how they themselves would feel if they were exhibiting the same expressive cues and then have an emotional response to the picture on the basis of situational cues.

DISCUSSION

In an effort to characterise the thought processes used by the children of the present study in making judgments of another's emotional state, 3 of the 4 logically possible forms of egocentric thought processes have been found to be inconsistent with the data and the 4th has been argued to be an unlikely process, given the data. If we rule out any mystical thought processes such as divine inspiration or direct perception of inner states, we are left with the conclusion that the children most likely acquired their knowledge of the feelings of others by sociocentric thought processes. Specifically in the present study the subjects appear to have come to an understanding of the inner states of the other by knowing how the other's expressive behavior relates to the other's inner states, regardless of the observing child's own inner states or those (s)he would experience in the other's situation.[7]

If children as young as 3 1/2 can understand the inner emotional states of another, even when they are different from his own, why

do children as old as 6 and 7 appear to be unable to understand that another has a different cognitive or preceptual state? I would like to suggest that understanding what another feels is a conceptually easier task than understanding what another thinks or sees. The task of recognizing emotional states in another, at least in the sense of negative or positive, can be reduced to recognizing the distinct outer signs of 2 different inner states. Understanding how another feels might be as simple as learning that certain facial configurations (e.g., a smile) are linked to certain distinct inner states (e.g., happiness). Learning a set of unique associations to each of a limited number of visual patterns seems a far easier task than learning, for example, the general law about visual perspective that the visual aspect of some objects changes with the different spatial relations one has to the object.

If it is task simplicity that makes comprehension of another's emotional states easier than comprehension of his perceptual or conceptual state, then if perspective and conceptual "role taking" tasks could be simplified, we ought to find "role taking" ability appearing at earlier ages in these tasks also. Recent studies in the area of perspective "role taking" by Marvin (1972) and Masangkay et al. (1974) provide support for the hypothesis of the importance of task simplicity in determining success or failure in "role taking" tasks.[8] These studies have demonstrated that when the task is made simple enough, children as young as 2 can under-

stand that another person is having a different visual perception from the self. In Marvin's study, 2, 3 and 4 year olds were asked to hold a picture so that the experimenter could photograph it. Most 3 year olds held the picture facing the camera and away from their own field of vision. In the study by Masangkay et al., 2 and 3 year olds were shown cards with one picture facing them and either a different picture or no picture facing the experimenter. Eight out of sixteen 2 year olds and eight out of nine 3 year olds correctly named the experimenters visual perception in all four trials. Neither of these "role taking" tasks requires the need to understand a general law about visual perspective, each can be solved on the basis of a simple association between looking and seeing. Thus, it appears that if "role taking" tasks involving visual perspective are simple enough to be solved on the basis of the rule that a person sees only what he's looking at, then young children can comprehend the other's perspective.[9]

In summary, although Borke has shown that young children are aware of the feelings of others, she has provided no evidence that the reasoning process used to obtain this knowledge is not an egocentric one. The present study does present such evidence. Three separate studies, the present one and those of Marvin and Masangkay et al., have presented strong evidence of "role taking" ability in children as young as 3 or 4. All three studies are alike in that the "role taking" tasks required only very simple cognitive functioning, in the case of the present study the under-

standing that people feel sad when they frown and happy when they smile, and in the studies of visual perspective the understanding that people see only what they are looking at. If young children can "take the view of the other", at least in simple tasks, then a child's social-cognitive development does not seem to be moving from a state of egocentrism to a state of sociocentrism but rather from a state of simple cognitive structures to states of more and more complex ones. On the basis of existing data then, it appears that the concepts of "egocentrism" and "sociocentrism" have little explanatory power, at least for the development of the child's ability to comprehend another's feelings and perceptions. Rather, it looks as though development, in this area at least, proceeds along a continuum characterized by more versus less complex mental processes, and not in steps characterized by sociocentric versus egocentric mental processes. Our tendency to accept the Piagetian distinction between egocentrism and sociocentrism may have prevented our recognizing the significant perspective taking ability of the young child, and thus caused us to overlook important formative stages in the development of social reasoning.

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FOOTNOTES

[1] Burns and Cavey (1957) found that 3 to 5 year olds made significantly more situation based judgments than 5 to 6 1/2 year olds. Their results are open to question, however, because they confounded type of stimulus with mode and amount of stimulus presentation. Their expressive cues were presented in the visual mode by way of line drawings, while their situational cues were presented in both the visual and auditory mode by line drawings and verbal descriptions. See Watson (1975) for a full discussion of their study.

[2] That the processes are logically distinct does not mean that they in fact occur independently. For example, a given response may be an act of both situational and expressive emotional projection. Whether or not the processes are separable in fact, they remain separable in thought.

[3] This imagining of the self into the other's situation need not be a conscious or intentional process.

[4] When psychologists talk of projection they are usually refering to either situational emotional projection or situational projective inference.

[5] The original design called for 16 boys and 16 girls from each grade. However it proved to be quite difficult for the nursery school children to achieve 100% correct scores on the pretest. Thus after pretesting 57 nursery school children it was decided to settle for a sample size of 12 boys and 14 girls for this age group.

[6] Although the hypothesis of a relationship between the judgment that another is experiencing an emotion and the experiencing of that emotion oneself was generally not supported, the hypothesis appeared to be supported for the nursery school children for happy expression pictures and for the 4th graders for sad expression pictures. Because in general a relationship was not found, the two instances of apparent relationship seem better explained on the basis of the nature of the pictures than on any necessary relationship between experiencing an emotion and judging another to be experiencing that emotion. In the case of the nursery school children the explanation appears to be that children of this age usually answered "happy" when asked how they themselves felt, if they responded at all, and it is suggested that they were answering the question "How do you feel?" rather than the question "How does the picture make you feel?". In the case of the 4th graders, it is suggested that they were following a social rule that one should feel sad when someone else is sad, and thus declare themselves to be sad not because their own feelings revel to them the feelings of others, but because their judgments of the others' feelings provide them with information of how they themselves ought to feel. See Watson (1975) for a full discussion of this point.

[7] The facts are slightly more complicated than this. For the nursery and 1st grade children it seems clear that their judgments of the other's emotion were infered from a rule connecting the other's expressive behavior to his/her inner states. For the 4th graders the rule seems to incorporate the other's situation as well as expression. But the point remains that in either case the judgments were based on external objective cues. See Watson (1975) for a full discussion of this point.

[8] A study by Weinheimer (1974) using a more simplified version of the "three mountains task" and other perspective "role taking" tasks, found perspectivistic thinking earlier than expected as well.

[9] Tasks such as Piaget's "three mountains" task do appear to require not only the knowledge that one sees only what one is looking at but also the knowledge that the visual aspect of some objects change as one's spatial relationship to the objects changes.

CONGRUOUS CUE PICTURE

FACIAL EXPRESSION STIMULUS

SITUATION STIMULUS

INCONGRUOUS CUE PICTURE

FACIAL EXPRESSION STIMULUS

SITUATION STIMULUS